GYPSY MOTH SUPPRESSION PROJECT SUMMARY
at
Chesapeake Marshlands
National Wildlife Refuge Complex
April 26, 2002

Report by:
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Forest Health Protection
USDA Forest Service
Morgantown, WV

On April 26, 2002 approximately 645 acres at Chesapeake Marshlands National Wildlife Refuge Complex were aerially treated to reduce gypsy moth populations and to prevent defoliation (Figure 1).

The gypsy moth nucleopolyhedro virus insecticide, Gypchek® was applied in a single application at the rate of $4x10^{11}$ occlusion bodies (OB's) mixed in Carrier 038A for a total volume of 128 ounces per acre.

A rotary-winged aircraft equipped with a Differential Global Positioning system (DGPS) was used to apply the insecticide.

This report documents the spray equipment, insecticide, meteorological conditions, foliage and larval development, and spray coverage for the project. Treatment efficacy will be reported once defoliation surveys are conducted in June and egg mass surveys are completed this fall.

Aircraft and Spray Equipment

Contact Vendor:	Helicopter Applicators, Inc.
Aircraft:	Bell 205
Pilot:	Glenn Martin
DGPS Brand:	AG-NAV
Spray System:	Simplex
Nozzle Type:	AU 5000 Micronairs
Number of Nozzles:	8
Blade Angle:	35°
VRU Setting:	13
Application Rate:	128 ounces/acre
Boom Pressure:	14 psi
Air Speed:	85 mph
Swath Width:	125 feet
Flow Rate:	21.46 gpm (desired) 21.69 gpm (actual)

Meteorological Conditions

Date	Time	Temperature Range	RH	Wind Speed	Direction
4/24	0615	44° F	62%	3 mph	NW
	0800	54° F	53%	5 mph	NW

Foliage and Larval Development

Block	Foliage Development	Larval Development
6	swamp white oak: 50-60% red oak 75-90%	23% first instar 64% second instar 13% third instar
9	white oak: 50-60% red oak: 70-75%	20% first instar 75% second instar 5% third instar

Narrative

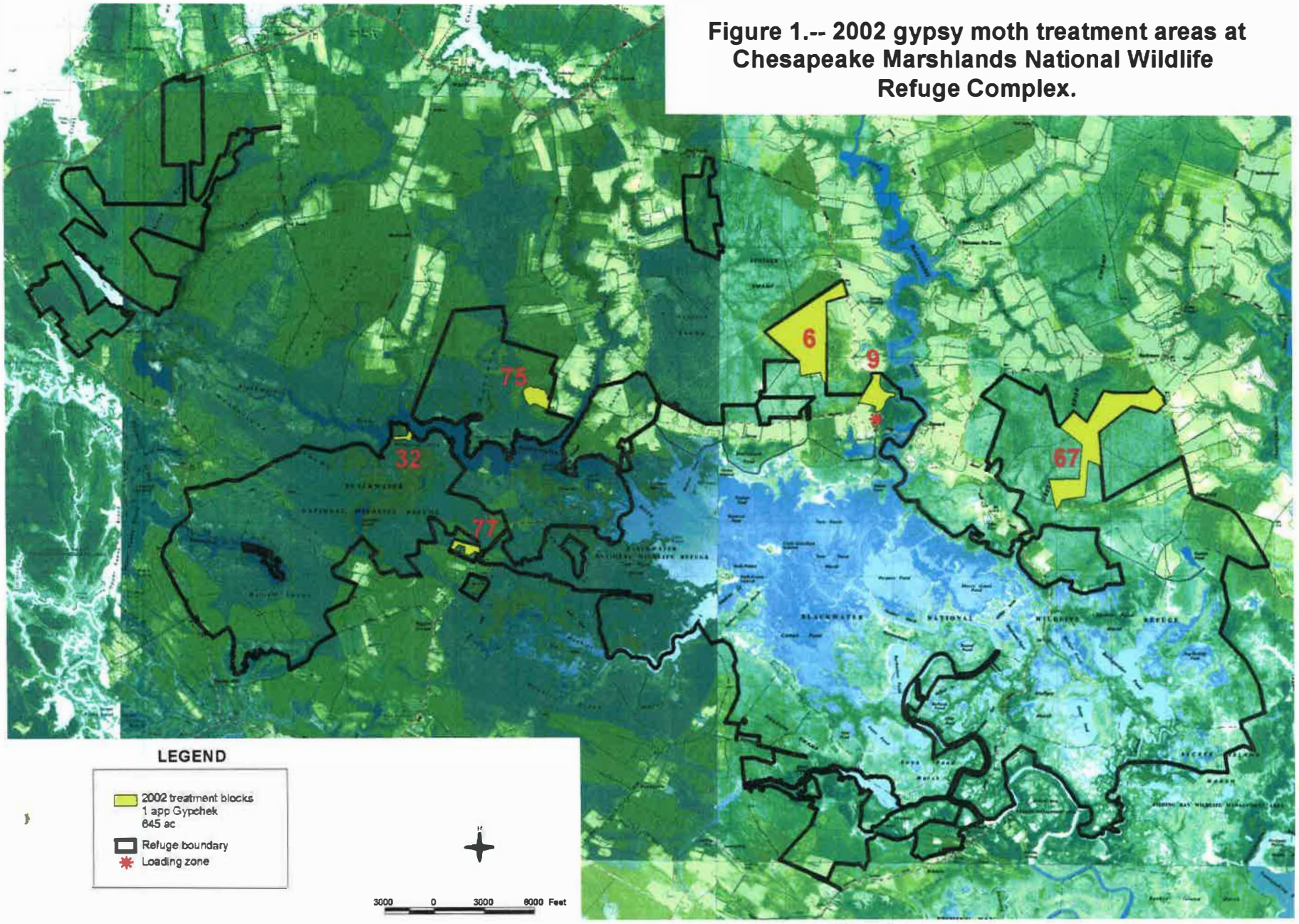
This suppression project involved 6 treatment blocks (Figure 1). The project was staged from the permanent helispot located east of the fire administration building.

Based on foliage observations in the treatment blocks following the treatment and by viewing the spray material settling into the canopy during the application, spray coverage was excellent. The AG-NAV printouts verify each block was thoroughly covered (Appendix A).

The application was conducted on the morning of April 26 from 0605 to 0836. A total of 645 acres were treated. The daily sortie report is attached as Appendix B.

The application went well with no accidents or incidents. Treatment timing based on larval and foliage development was excellent.

Figure 1.-- 2002 gypsy moth treatment areas at Chesapeake Marshlands National Wildlife Refuge Complex.



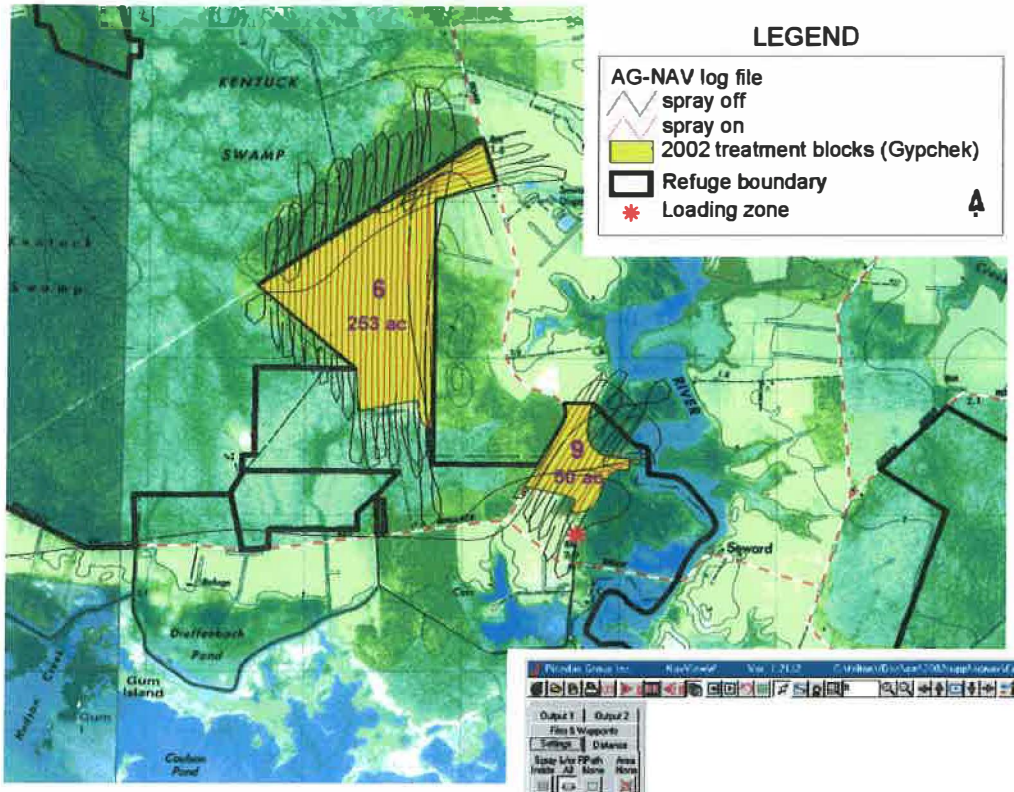
USDA Forest Service, State & Private Forestry, FHP, Morgantown, WV

5/02 KDF

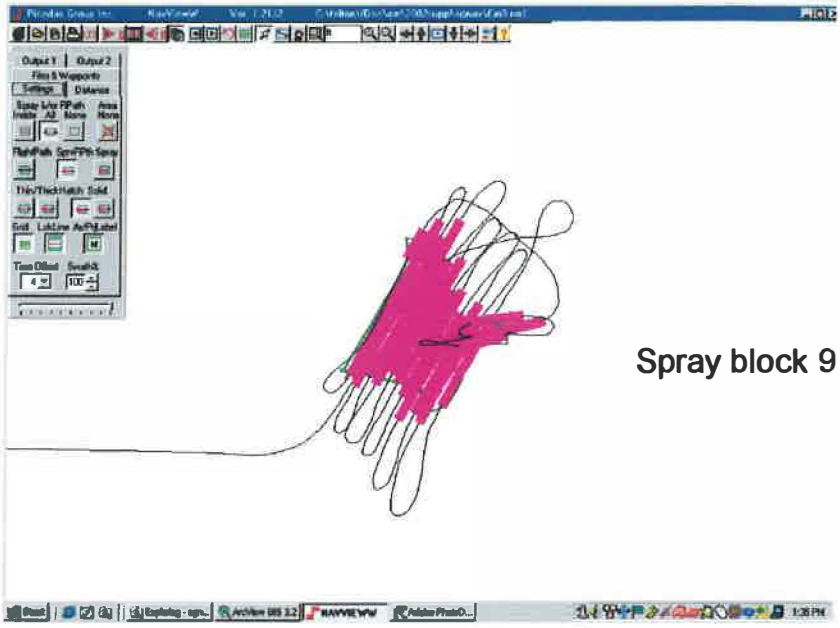
APPENDIX A

AG-NAV PRINTOUTS

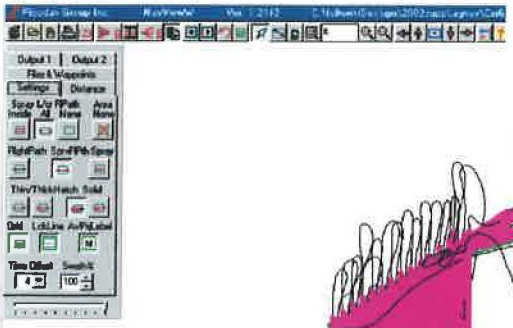
Appendix A.-- Chesapeake Marshlands NWR Complex Gypsy Moth Suppression Project, Blocks 6 and 9, April 26, 2002.

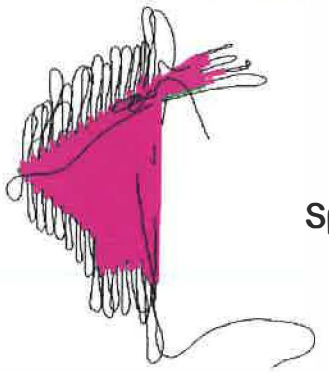


AG-NAV log files



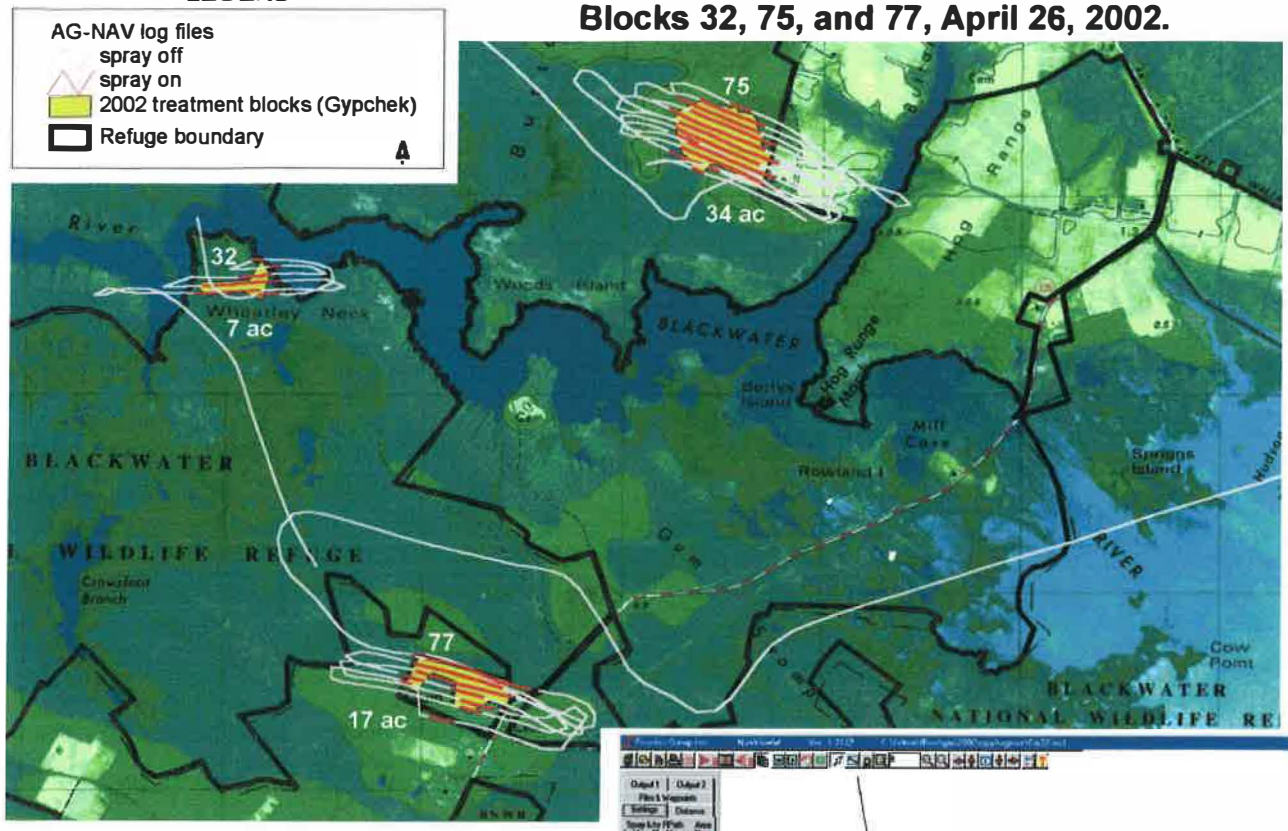
Spray block 9



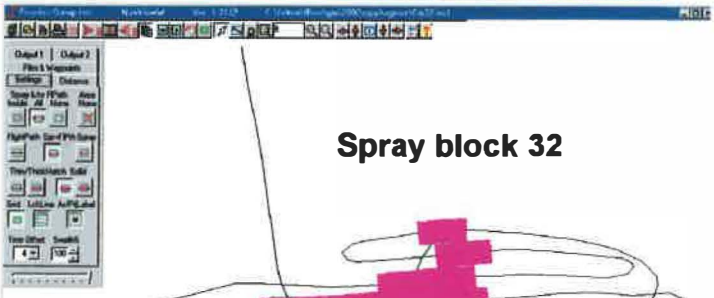


Spray block 6

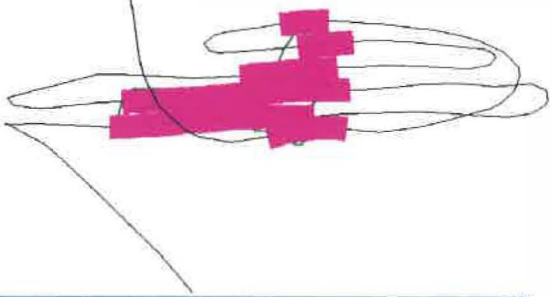
Appendix A.-- Chesapeake Marshlands NWR Complex Gypsy Moth Suppression Project, Blocks 32, 75, and 77, April 26, 2002.

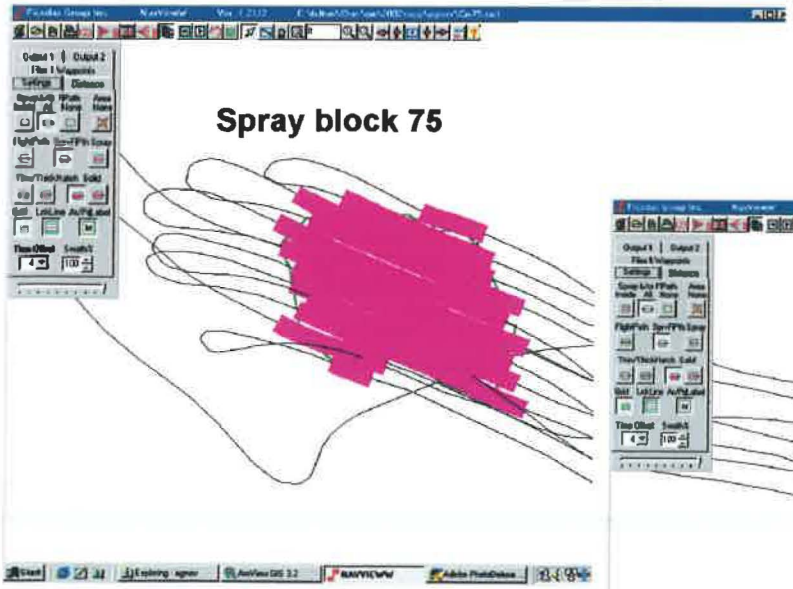


AG-NAV log files

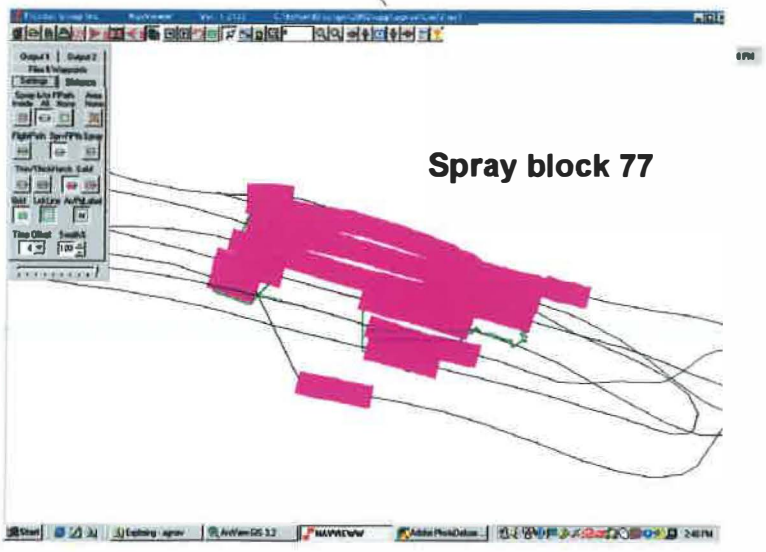


Spray block 32



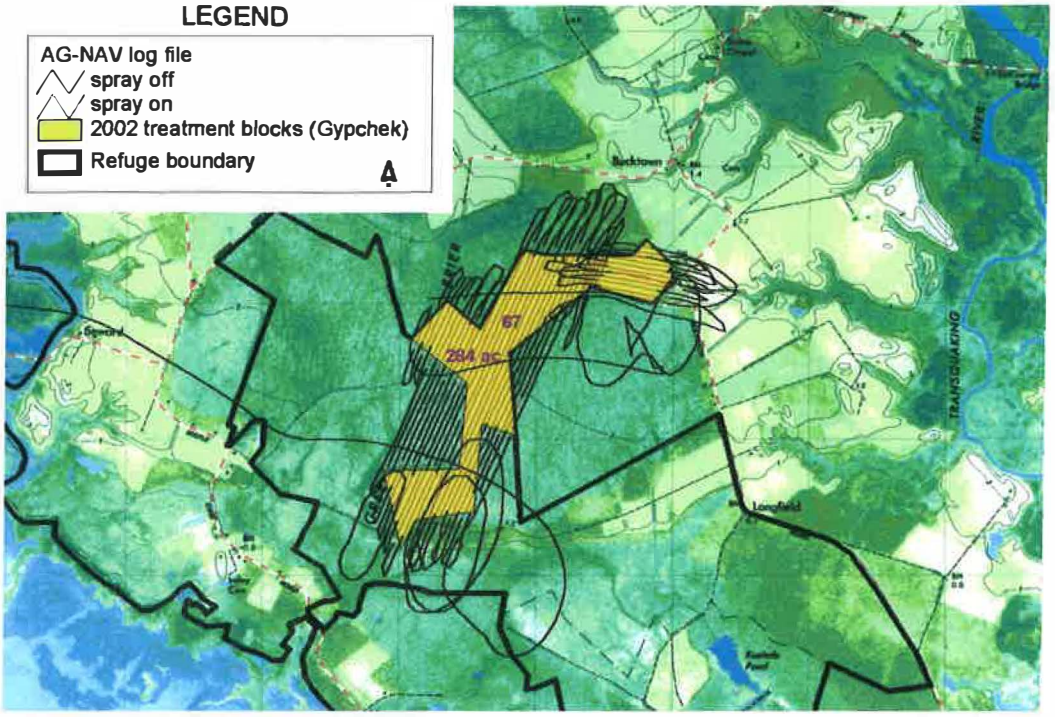


Spray block 75

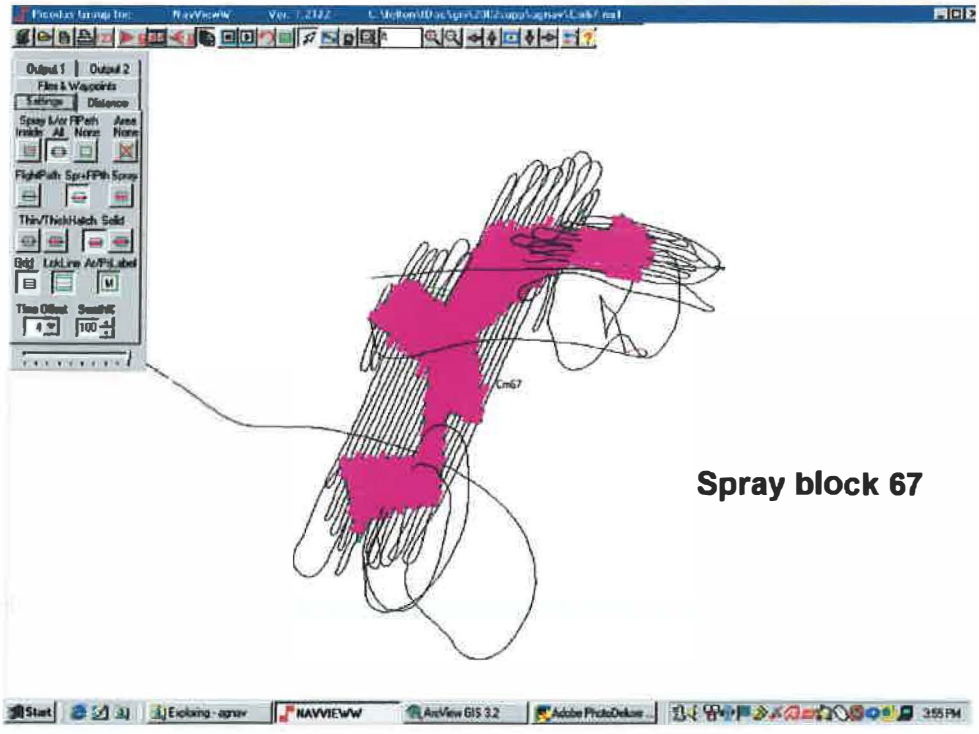


Spray block 77

Appendix A.-- Chesapeake Marshlands NWR Cmplex Gypsy Moth Suppression Project, Block 67, April 26, 2002.



AG-NAV log file



Spray block 67

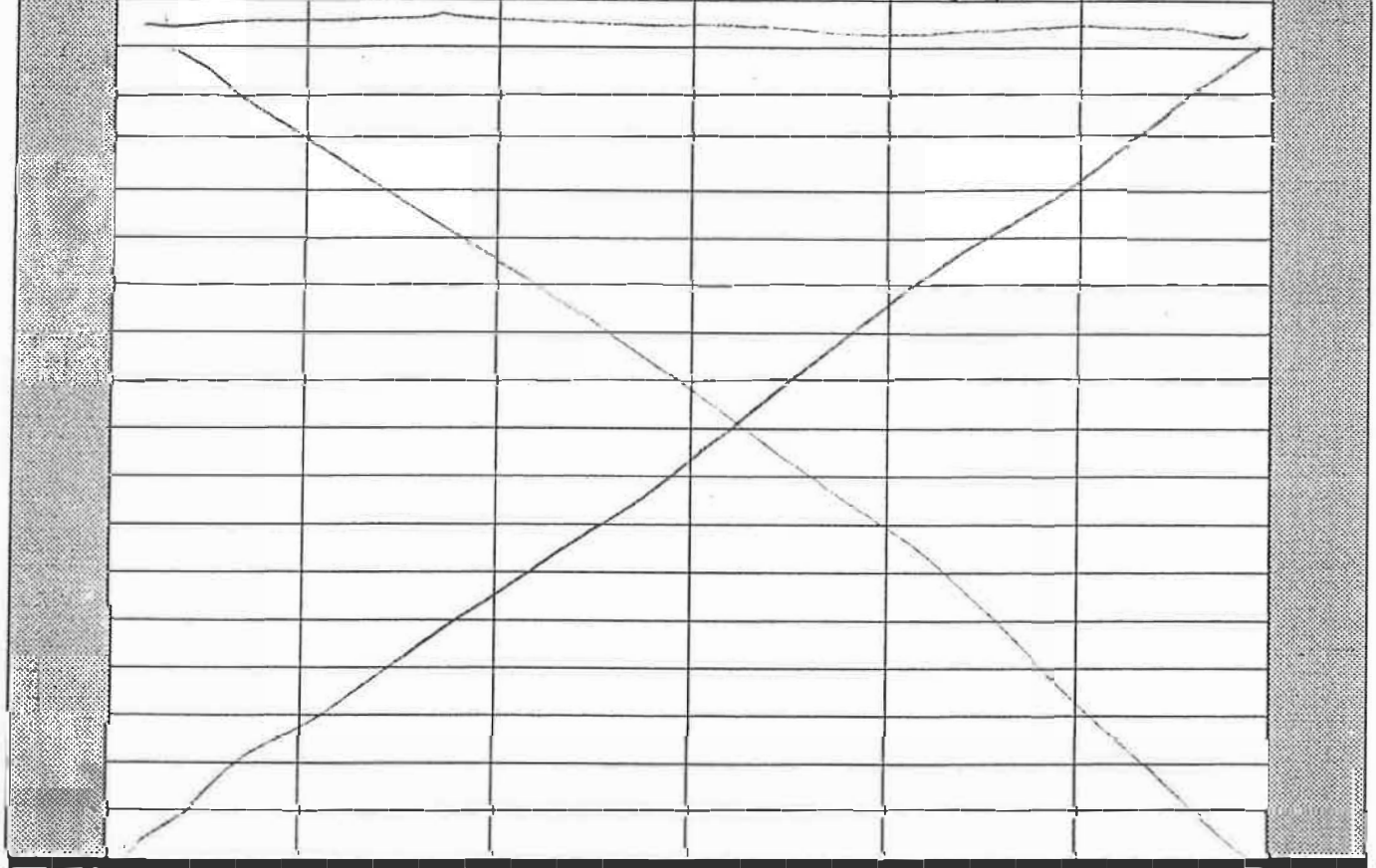
APPENDIX B

DAILY SORTIE REPORT

DAILY SORTIE REPORT

Project coordinator: Brad Onken
Date: 4/26/02
Aircraft ID: N658HA (Bell 205)
Location: Chesapeake Marshlands NWR Complex
Pilot: Glenn Martin

Load #	Gallons	Take off time	Return time	Acres treated	Block ID
1	253	0605	0643	253	6
2	284	0653	0745	284	67
3	108	0758	0836	108	9,75,77,32
				645	



COMMENTS (Cause of delays, accidents, reason for shut-downs etc.)

0615:
Wind - 3mph NW
Temp - 49°
RH: 62%

0800
Wind - 5mph NW
Temp - 54°
RH - 53%

Total Acres Treated = 645 acres

SIGNATURES
Project Coordinator: Brad Onken
Contractors Representative: Glenn Martin